Official Draft Public Notice Version **January 22nd, 2026**
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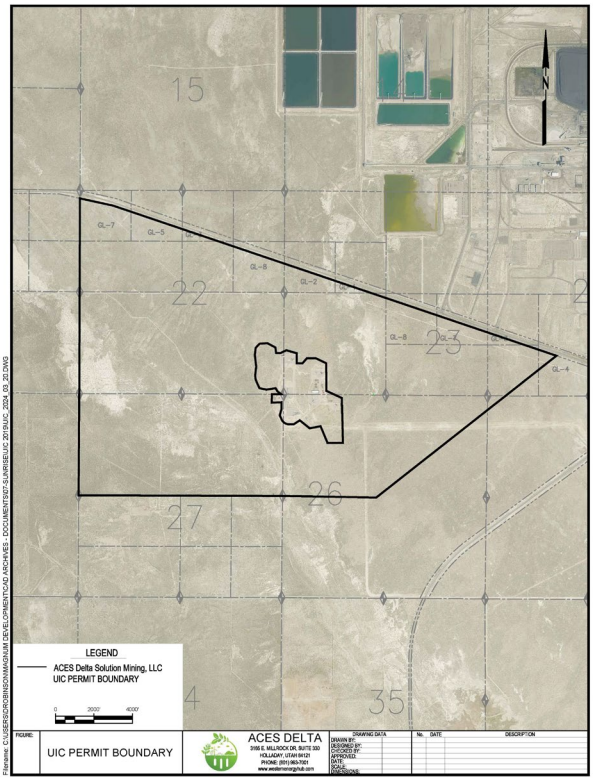
UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

DRAFT FACT SHEET AND STATEMENT OF BASIS
UNDERGROUND INJECTION CONTROL (UIC) CLASS III & V AREA PERMIT MODIFICATION
UTU-27-AP-718D759 & UTU-27-AP-BDCCF0C
****** 2026**



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I. Purpose of the Fact Sheet

Pursuant to section §144.39 of the Underground Injection Control (UIC) regulations in Title 40 of the Code of Federal Regulations (CFR) which is incorporated by reference in the Utah UIC Administrative Rules (R317-7), the purpose of this fact sheet is to briefly describe the principal facts and considerations that went into preparing a permit modification for the ACES Clean Energy Storage Class III and V Permits ("Permits") by the Division of Water Quality ("Division"), the UIC permitting authority. To meet these objectives, this fact sheet contains a description of the permitted facility, a description of the injectate, information on the permitting process, and a statement of basis for the major modification. This Permit was drafted under UIC permit regulations for Class III and V injection wells associated with the production of electric power (R317-7-3(3.5)(M) and 40 CFR §146.5(e)(12)) by the Utah UIC Director authority per Utah Admin. Code R317-7-1(1.8).

II. Brief Description of the Facility

ACES I ("Permittee") plans to inject, store, and withdraw hydrogen from underground storage caverns constructed in a tectonically thickened salt body located approximately 9 miles north of Delta, Utah, in Millard County, and at depths greater than 3,000 feet below ground surface. The construction of these caverns is permitted by the ACES I solution mining UIC Class III Permit UTU-27AP-718D759. The operation of the storage caverns is permitted by UIC Class V Permit UTU-27-AP-BDCCF0C.

III. Description of Injectate

The storage caverns are created by solution mining with fresh water under the UIC Class III Permit, which limits cavern capacity by imposing strict cavern diameter to pillar width (salt mass between caverns) ratios and standoff distances to the edge of the salt formation itself. Brine created by the solution mining process is stored in nearby surface solar evaporation ponds, which are regulated under Ground Water Discharge Permit UGW270010. The completed caverns are then used to store and recover gaseous hydrogen by injection and recovery under pressure as regulated by this UIC Class V permit. Hydrogen is generated onsite by electrolysis of water and is used to generate electricity by combustion. The total storage volume in the two caverns (CW-2 and CW-23) to be constructed for this project is 11 million barrels. The limits on total hydrogen capacity and on injection and withdrawal rates by mass and volume are constrained by the total cavern volume and the maximum allowable hydrogen gas pressure (specified in the Storage Cavern Field Operating, Monitoring and Reporting Plan (SCFOMRP) which is Permit Attachment C).

IV. Information on the Permitting Process

The Class V Permit Major Modification was prepared by the Division for public notice and public comment according to 40 CFR §144.39 which is incorporated by reference in Utah Admin. Code R317-7-1. Public comments will be accepted by the Division for 30 days following the first day of public notice in the local newspaper that serves the affected community. Only conditions subject to the modification are reopened (40 CFR §144.39(c)).

V. Statement of Basis for Establishing Permit Conditions

The basis for the UIC Class III and V permits for hydrogen storage is to ensure compliance with the Utah UIC administrative rules for Class III and V injection well activities, Rule R317-7. The Permittee requested a Permit modification to adjust cavern spacing requirements based on a safety factor determined by a geomechanical analysis, and to update maximum and minimum pressure requirements. Other minor permit language was updated to reflect current Division standards.

VI. Summary of Conditions of the Permit for Hydrogen Storage

a. Permit Modifications

i. Modify Cavern Configuration, Spacing, and Standoff Requirements

The Modification alters the permit under the operating requirements found in Part III.D.4 of the Class III Permit UTU-27-AP-718D759. The permit currently requires the following:

"Each cavern shall be developed and spaced with sufficient salt back (salt above the roof of the cavern), standoff (set back from the boundary of the salt body) and set back from the permit area boundary to maintain mechanical integrity of the caverns, the salt web (the in-situ mass separating adjacent underground caverns and caverns and the edge of the salt body), and the overburden during all modes of cavern development, operation and abandonment for the lifetime of the facility".

According to the current requirements, ACES must maintain a minimum pillar thickness between caverns based upon a pillar-to-diameter ratio. The requirement has been updated to achieve a maximum web safety factor of 2.00 based on a geomechanical analysis to determine mechanical integrity. The analysis can be found in Attachment F of the Class III permit. The language in the Class III permit now reads:

"The Cavern Configuration including Salt Back, Standoff, and Required Pillar Width to achieve a Maximum Web Factor of Safety Value of 2.00 or greater for each storage cavern shall be defined by a geomechanical analysis required by Part III.D.2, above."

The following paragraph has been removed from Part III.D.4.a of Class V permit UTU-27-AP-BDCCF0C:

"ACES I shall maintain at all times, including but not limited to, cavern siting, development, expansion, and operation, a salt back thickness equal to a minimum of 4.0 cavern diameters above the cavern, minimum spacing between all hydrogen storage caverns of a two-to-one (2:1) pillar-to-diameter ratio (P:D), which is the equivalent of a three-to-one (3:1) center-to-center or S:D ratio, where S is the distance between the centers of two caverns or between a cavern and the edge of the salt body, D is the average of the maximum diameter of the two caverns, and P is the minimum pillar thickness between adjacent caverns (the "Required Pillar Width")."

It has been replaced with:

"The Cavern Configuration including Salt Back, Standoff, and Required Pillar Width to achieve a Maximum Web Factor of Safety Value of 2.00 or greater for each storage cavern shall be defined by a geomechanical analysis required by Part III.D.2 of the Class III UIC Permit"

Supporting documents, such as the Cavern Construction and Development Plan and Hydrogen Cavern Field Operating Plan have been updated to match this change.

ii. Update Class III Permit UTU-27-AP-718D759 Injection Pressure Requirements

The Modification alters the permit under the operating requirements found in Part III.D.13 and Part III.D.14 of the Class III Permit UTU-27-AP-718D759. The Maximum

Allowable Operating Pressure has been updated from 0.85 psi/ft to 0.80 psi/ft based on the latest geomechanical data. The Minimum Allowable Operating Pressure has been updated from 0.25 psi/ft to 0.30 psi/ft based on the latest geomechanical data. This is to align the requirements of the Class III permit with the Class V's recent modification. Supporting documents, such as the Cavern Construction and Development Plan have been updated to match this change.

iii. Update Class III Permit UTU-27-AP-718D759 Monitoring Requirements

The Modification updates the monitoring report due dates. The dates now match the Class V Permit.

iv. Update Permit Language

The Modification updates permit language to current Division standards.